

# The Effect of Kahoot! Software on Students' Vocabulary Mastery for Elementary Students: A Literature Study

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## Abstract

Kahoot! is a game-based learning (GBL) platform and used to know students' knowledge, for formative assessment or as a break from traditional and monotonous classroom activities. The aim of this research was to investigate whether there is students' positive perspective and significant effect after used of Kahoot! on students' vocabulary mastery for elementary students. Many studies have been published on the effect of using Kahoot! in the classroom activities. This research presents the result of a literature review on the effect of using Kahoot! for learning, specifically on students' perspective and learning process. The literature review includes 220 studies, but it's including duplicated journals that did not match with the inclusion criteria were excluded. The 15 studies used and found out that after the use of Kahoot! students' and teachers have a positive perspective and it shows the significant effect on learning vocabulary mastery. However, there are also some studies where the use of Kahoot! Has little or no significant effect. The most challenges mentioned by students' commonly the technical issue such as unreliable internet connection, stressful time pressure when they try to find the answers some students' have failing quiz experience and teachers' find it challenging to deal and work together with the technology.

Keywords: *English Vocabulary, Elementary Students, Kahoot!*

## 1. Introduction

There are hundreds of different languages in the world. From that, one of the most popular languages is English because it is considered as the International Language. Because of its popularity, many people especially Indonesians want to learn English, the English e.g., slang words and accents has significant ramifications for teaching and assessment (McKay, 2018). Study from Schmitt et al., (2015) he stated: "*A language is an instrument that is used by human to*

*convey messages either spoken or written. Human uses language to convey messages and to express meaning, while vocabulary is needed to use it.*"

English is taught as a foreign language in Indonesia and taught from elementary school to university as well. Meanwhile, teaching for elementary students different than teaching for university students. To teach elementary students, the teachers have to be

more interactive and have an interesting method. Kahoot! can be used for learning vocabulary. So, the learning process becomes more interesting and effective. Bicen & Kocakoyun, (2018), stated that Kahoot! is one of the most popular game-based learning platforms that makes it easy to create, share and play materials, exercises and homework in minutes, provide feedback facilities. Kahoot! can be used for learners of all ages and all subjects, especially elementary students. It is more effective for vocabulary learning than teachers with the traditional method applied. It was also stated by Zhang, Qi & Yu, (2021) that Kahoot! could enhance curricular interaction between students and teachers as well as extracurricular collaboration between or among students.

## **2. Literature Review**

### **2. 1. Vocabulary**

There are different definitions of vocabulary and here some conclusions by authors. Let's start with Alqahtani (2015) he stated that the definition of vocabulary is the total number of words that are needed to communicate ideas and express the speakers' meaning. Rohmatillah (2020) assumed that vocabulary is a list of words as a basic component of language proficiency which has a form or expression and contains of aspects, those are meaning, use of word and form (e.g., pronunciation and spelling) as Syafrizal & Haerudin (2018) outlined that vocabulary is the words that we teach in foreign language such as English. However, vocabulary may be more than just a single word, (e.g., father-in-law, handbag) which are made up of two or three words but express a single idea.

### **2. 2. Issues in Vocabulary Acquisition**

English proficiency depends on student vocabulary knowledge. Although developing vocabulary is considering important, it has some problems, especially, for non-native speaking students. Students with low vocabulary knowledge it's unlikely show good academic performance. In addition, the students found difficulties in choosing the appropriate meaning of the words and also still confuse in using the word based on the context. The last, the students were also still confused when they found words or expression that were idiomatic and the limitations of sources of information about words.

It's also supported by Rahayu (2015) He write his own opinion that students' issues in learning vocabulary have two factors those are internal and external factors. The students lack of understanding of grammatical patterns, incorrect pronunciation, minimum opportunities, mother tongue language, students' interest, seldom practice, less discipline and fear of making mistake. There were some Issues related to the teachers' teaching varieties, students' motivation and classroom condition where students feel bored and unmotivated that will make students have no chance to mastering vocabulary. So, based on the reason above, it is suggested that teachers must master, understand and able to use the nowadays technology which can provide them many teaching variations.

### **2. 3. Technology in Teaching**

The globalization of education which is supported by the function of Information and Communication Technology (ICT), teacher

must be more communicative and creative in teaching. Ghavifekr et al., (2015) expressed that to make learning more effective educators are required to create learning environment which supporting the learning process using technology, enable to develop the technology skill and integrate it with computers in learning process which is adjusted by the students' necessity. It also supported by Lolita, (2020) stated that the success of teaching is determined on how teachers delivering the learning material to the students. Thus, teachers need to find, develop and make effective technique to motivate students in learning and improving their vocabulary.

#### **2. 4. Kahoot!**

Kahoot! is a game-based learning platform, used as educational technology in schools and other educational institutions. Its learning games, "Kahoot!", are user-generated multiple-choice quizzes that can be accessed via a web browser or the Kahoot! application on students and teacher mobile phone. (Kahoot, 2013) Kahoot! was found in 2012 by Johan Brand, Jamie Brooker and Morten Versvik in a joint project with the Norwegian University of Science and Technology. They teamed up with Professor Alf Inge Wang and were later joined by Norwegian entrepreneur FutureSh. It is designed for social learning, with learners gathered around a common screen such as an interactive whiteboard, projector, or a computer monitor. According to Microsoft (2017) The site can also be used through screen sharing tools such as Skype or Google Hangout. In the other definition upgraded Kahoot! (2018) The game design is such that the players are required to

frequently look up from their devices. It's explained in Kahoot! (2017) The gameplay is simple, all players connect using a generated game PIN (Commonly teacher share it) shown on the common screen, and use a device to answer questions created by a teacher.

### **3. Research Methodology**

Literature design is chosen by the writer in this research. Choosing the correct design is important for the researchers to prepare the plan and steps in composing the paper. The data collection is also necessary for this paper in order to support the researcher's ideas in this paper. The concept development that is chosen by the researcher will be reviewed and developed structurally. The researcher also analyzed the sources that are used whether they are relevant according to the paper's theme or not. The steps that the researcher did was making notes, collecting quotes, or relevant information that are arranged systematically in order to recall those sources easily when needed. The inclusion criteria can be displayed in a table form. Noampoerani, (2018) explained that by including the available criteria based on the information from selected sources in order to make the research goes effectively and efficiently.

#### **3. 1. Research Design**

This research used a literature review design. According to Harris (2020) literature review is as a process of selecting material and reviewing (reading) that material. In collecting data, the writer gathered relevant information which is related to this study

from various sources mostly from either International or local journals and textbooks.

Literature study is conducted by researchers with the main objective of finding a foundation to obtain and build theoretical foundations, frameworks of thought, and research hypothesis. So that researchers can classify, allocate, organize, and use a variety of libraries in their field. Kartiningrum, (2015) stated that by conducting a literature study, researchers have more in-depth broad and deep to the problem to be studied.

### 3. 2. Research Site and Participants

The use of Kahoot! which to increase student learning motivation in classrooms, reduce boredom, foster interactivity, and have positive effects on students' learning outcome for academic performance, enhancement of the students' engagement (Barnes, 2017). It is supported with another study from Licorish, (2018) he stated that enjoyment could improve concentration and dynamic class environment. Based on research from Plump & LaRosa, (2017) they assumed while teaching vocabulary should be sustainable, from meaningful and applicative activities that can be done by using Kahoot!. The teaching and learning process should be done by paying attention to the students' condition because happy students learn much better.

### 3. 3. Data Collection and Analysis

The data collected were mainly obtained from journals and research article which are reviewing with the related topic. Data collection is done by using documentation study technique. Mufida (2015) stated that by making notes, quotes, or information

systematically arranged so that research can be easily searched again if at any time needed. Web based source that is selected by the researcher such as *googlescholar.com* and *sciencedirect.com* from the web mentioned above, the researcher can filter relevant journals that can be used in this paper.

There are several steps in analyzing journals and research article for this literature approach such as: Finding the most relevant articles by reading the titles, abstracts and the findings & conclusion. It is done in order to obtain the topics that relate to the literature research; Scanning & skimming the whole articles; Creating notes for important parts that are found in the articles. The steps above are extremely important in order to get the relevant information. After the document analyzed, the inclusion and exclusion were applied.

### 4. Findings and Discussions

The result study from Quiroz (2018) investigated in his quasi-experimentally vocabulary improvement by using Kahoot! as a medium of learning. The sample was non-probabilistic of a public school in Santiago, Chile. There were 28 out of 31 students in control group and 29 out of 39 students in experimental group which all of the sample taken was female. The research was employed in a 4-week experiment. With the same teacher for both groups, the control group learnt vocabulary by using the traditional methods such as exercises on the whiteboard and student's worksheet while the experimental group practiced using Kahoot! In order to avoid biases, the pre and post-test results were assessed by two different teachers. To obtain the results, the researched

employed the KR-20 test. The result was both tests had high reliability (.88) The results of post-test group score was 35% higher than the control group which indicated that the intervention in this case Kahoot! had a medium size effect according to the T-test ( $d=.716$ ) It can be concluded that using Kahoot! to improve English vocabulary has statistically positive effect although this research has a limitation such as the small and only female participants.

The investigation conducted by Zarzycka-Piskorz, (2018) showed that the improvement of students' motivation in learning English especially grammar in his qualitatively research. The researcher selected 112 students (76 female & 36 male) in Krakow, Poland. The students selected has played the Kahoot! application at least once and three times in the classroom. After the application used, the researcher employed a questionnaire which consisted of 6 questions in order to obtain the students' perspectives after using Kahoot! The result showed that 80% of the participants recommended using Kahoot! as the tool of learning English. 68% of the participants found the application to be fun and positive. Even though most of the students haven't played any language games before in either classroom or home, 70% of the participants found Kahoot! motivating them to learn English especially grammar while the 26% showed indifferent. The researcher also gave a set of question which answered why Kahoot! is motivating. It motivated them because they can win (66%), master their knowledge (34%), do it with others (47%) and know the purpose (50%). The desire to win dominated because the Kahoot! reveals the winning and the losing as they wait for the rewards at the end of the

session. Most students felt that Kahoot! was enjoyable (72%), interesting (61%) and better than traditional teaching (79%). It can be concluded that Kahoot! had a positive impact based on the results above.

Based on this research, the writer found out that the best way to use Kahoot! is that the students must make their own quiz. In that way, the students are automatically study the chosen topics, create the answer and find the relevant illustrations. In order to make good quizzes, they must master the topic very well. 57% of the students agreed that using Kahoot! in every learning activity while 37% once in a week. Based on the descriptive statistics which employed the Mann-Whitney test, no significance difference from the two cases (one time use & one semester use) but it can be seen that the one-time Kahoot! usage result is slightly higher than the one semester usage.

The discussion focuses on the findings and two proposed research questions. The first discussion is about How is the student's and teachers' perspective in using Kahoot! Meanwhile, the second discussion is does Kahoot! have any significant effect on student Vocabulary mastery. In attempt to make the teaching and learning process successful, especially in teaching vocabulary, the teacher must consider some factors. As mentioned before that there are four factors, which are: (1) the students they are teaching, (2) the class condition, (3) their method, (4) and the strategies. The most important is teacher should encourage student's motivation in order they could enjoy and interest to learn vocabulary. Based on Licorish, (2019) he stated that GSRSs is an example of a gamification approach that

makes use of game principles and student response systems tools to support learning, engagement, motivation, and fun during the learning process. According to Plump & LaRosa, (2017) stated that GSRs, namely Kahoot! provides lecturers with meta-cognitive support and encourages students to reflect on their understandings of existing concepts while helping them broaden their knowledge and facilitate their ability to argue their viewpoints on various topics. The

## 5. Conclusion

The conclusions are presented according to the results study and discussions. The conclusion deals with the result of the teacher and students' perspective after using Kahoot! and the significant effect of Kahoot! on student's vocabulary mastery. The conclusion based on the result of research that student's perspectives after using Kahoot! based on research by Lee, (2018) He stated that students learning motivation improved. The result showed that the students felt excited, the learning was fun and encouraged them to study more. The high performing students admitted Kahoot! helped them focus on the teaching-learning activity and assisted them to monitor any misconceptions and errors in their knowledge. Although that some students especially the low performing students did not show any improvement and their interest in learning is significantly improved. Another study by Zarzycka-Piskorz, (2018) from this study it showed that the 80% of the participants recommended using Kahoot! as the tool of learning English. 68% of the participants found the application to be fun and positive. Even though most of the students have not played any language games before in either classroom or home,

teacher uses more than one teaching strategies using Kahoot! as a media which has a variant game-based learning such as: Jumble word, Video game, and flashcard mode. and use vocabularies for communication in daily life. These strategies help the students in easier, faster, and more enjoyable ways to master vocabulary so they really support the students' vocabulary improvement.

70% of the participants found Kahoot! motivating them to learn English especially grammar while the 26% showed indifferent. The teacher realized that Kahoot! helps the students in learning vocabulary as well as motivate them. The perspective of both teachers and students are also positive after using Kahoot! By using Kahoot! teachers can be more creative and innovative.

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